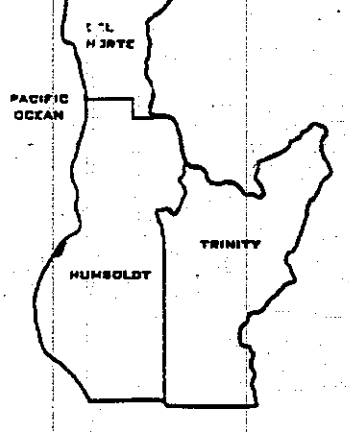
NORTH COAST UNIFIED AIR QUALITY MANAGEMENT DISTRICT

5630 SOUTH BROADWAY EUREKA, CALIFORNIA 95501
PHONE (707) 443-3093



January 12, 1984

Mr. Cecil D. Sterling
Director, Environmental Systems
Ultrasystems Inc.
16845 Von Karman Avenue
Irvine, CA. 92714

Dear Mr. Sterling:

We have completed our review of your application for an Authority to Construct a wood fueled steam/electric generation facility at your Blue Lake, California plant site. Based upon this review we have determined that:

1. The project is subject to the requirements of the California Environmental Quality Act and a negative declaration has been prepared and filed by the City of Blue Lake.

2. The project is subject to the new source review procedures of Regulation 1 of the California North Coast Air Basin and all appropriate evaluations and determinations have been completed by our office.

3. The project is not subject to federal PSD review or federal new source performance standards.

4. Air contaminant emissions from the proposed project will not cause a violation of any state or federal ambient air quality standard nor interfere with the control strategy contained in the State of California Air Quality Implementation Plan.

After these findings on the application; public notice on the project having been given in the Times Standard on December 4, 1983; hearings having been held on the project by the Blue Lake Planning Commission; and all public and agency comments having been reviewed and considered; the North Coast Unified Air Quality Management District is issuing Authority to Construct approval, HAC-129, to Ultrapower Incorporated subject to the following terms and conditions:

a. The boiler and fuel drying system operating capacity shall not exceed a daily average steam production rate of 105,000 pounds per hour unless prior written approval is obtained from the District.

b. Particulate emissions from the boiler and fuel dryer shall be controlled by multi-cyclone collectors and a ~~granular bed electro-~~ ESP (3/84 scrubber of a design approved by the District and particulate emissions are limited to 20 percent opacity and 0.045 pounds per million BTU heat input to the boiler.

c. Gaseous air contaminant emissions from the boiler and fuel dryer shall be controlled by furnace design and operating procedures of a type approved by the District and shall be limited to:

1. Sulfur Dioxide: 0.03 pounds per million BTU heat input
2. Nitrogen Oxides: 0.20 pounds per million BTU heat input
3. Carbon Monoxide: 0.35 pounds per million BTU heat input

d. Ultrasystems shall provide stack test ports, platforms and platform access as specified by the District.

e. Ultrasystems shall install, maintain and continuously operate a recording smoke opacity meter in the stack from the electro-scrubber at a location specified by the District.

f. The Ultrasystems plant shall be fueled exclusively with wood and bark, unless prior written approval is obtained from the District for use of an alternate type of fuel.

g. Within 120 days after plant start-up Ultrasystems shall test the boiler and dryer for emissions of particulate matter, sulfur dioxide, nitrogen oxides and carbon monoxide and report the results to the District. Said tests shall be conducted at maximum design operating capacity.

All procedures for testing and monitoring at the Ultrasystems plant shall be in accordance with NSPS Sub Part D, Sections 60.46 and 40 CFR Part 60, Appendix B

Please submit additional plans and specifications of boiler, dryer and air emission control equipment details to our office for approval prior to construction. Structural and foundation details need not be submitted for review.

Sincerely,

Charles Sassenrath

Charles Sassenrath
Air Pollution Control Officer

cc. EPA
ARB
Blue Lake Planning

5530 South Broadway
AIR QUALITY MANAGEMENT DISTRICT
EUREKA, CALIFORNIA 95501
Ph. (707) 443-3C

APPLICATION FOR: (Check applicable box)

☒ Authority to Construct ☐ Permit to Operate

A. This application must be filled out completely and returned to the North Coast Unified AQMD.

B. Applications are incomplete unless accompanied by DUPLICATE copies of all plans, specifications ar drawings required. Additional information may be required of applicant by air pollution control office

C. This application must be signed by a responsible member of the organization that is to operate the equi ment for which application is made. INCOMPLETE APPLICATIONS ARE NOT ACCEPTABLE.

APPLICATION INFORMATION

PERMIT TO BE ISSUED TO (Business license name of corporation, company, individual owner or governmental agency that is to operate the equipment): ULTRAPOWER INC.

MAILING ADDRESS: NUMBER 15845 STREET Von Karman Avenue CITY OR COMMUNITY Irvine, CA ZIP CODE 92714

ADDRESS OR LOCATION AT WHICH THE EQUIPMENT IS TO BE OPERATED: NUMBER See attached STREET Industrial Park CITY OR COMMUNITY Blue Lake 95525 ZIP CODE

GENERAL NATURE OF EMITTING SOURCE: 11 MW Wood Fired Boiler/Generator

EQUIPMENT DESCRIPTION:
Describe equipment by name, make, model, size, and type. Note any special air pollution control features.

See Attached

PRESENT STATUS OF EQUIPMENT (Check and complete applicable items):

	ESTIMATE STARTING DATE	ESTIMATE COMPLETION DATE
☒ Construction or installation not started.	March 1984	November 1985
☐ Construction or installation partly completed.		
☐ Construction completed.		
☐ Equipment is to be altered.		
☐ Equipment is partly altered.		
☐ Equipment has been altered.		
☐ Transfer of operator, owner or lessee.		
☐ Transfer of location.		

If this equipment had a previous written permit give name of corporation, company or individual owner that operated this equipment and state previous Air Pollution Control District permit number, if known.

NAME PERMIT NUMBER

Signature of responsible member of firm:

NAME Terry Ogletree

TITLE President, Ultrapower

PHONE NO. (714) 863-7000

Date of application:

Permit Granted ☐

Not Granted ☐

Granted subject to established conditions ☒

Permit Number HAC-129 Validation 1-12-84

LAM

Po ant:
ARB USE ONLY
File No:
Form No:

BACT DETERMINATION REPORTING FORM
(To be filled out when A/C is issued)

SECTION A: General Information

Project Name Ultrasystems-Blue Lake District North Coast Unified AQMD

Phone No. (707) 443-3093

Permit No. HAC-129 District Contact Chuck Sassenrath ATSS No. ( )

Date A/C Issued January 12,1984 Project is (check): [x] New [ ] Modification

SECTION B: Source Description

Type of Equipment Wood waste fueled steam/electric generation plant with cascade type fuel dryer Code 1.4 Vendor not yet selected

Operation: hr/day 24 Days/Week 7 Week/Year 52

Design Capacity 162million BTU/hr heat input Operational Level (%) 92
105,000 lb/hr steam (11 megawatt)

Permit Conditions: [ ] Hours of Operation [x] Fuel Use [x] Thru-put Capacity [x] Emissions
[x] Other (name) stack opacity monitoring

SECTION C: Emission Data

Control Technique Multiclones and grandular bed electro-scrubber for particulat
Furnace combustion design for CO, NO_x and hydrocarbons

Vendor of Control Equipment Combustion Power Company

Control Level: particulate Efficiency (%) 99.2 Emission Limit 0.045 lb/million BTU heat in

Control Technology Used (check): [x] New [ ] Demonstrated

Emission Rate: Particulate Before Control 22,000 lb/day After Control 175 lb/day

Source/Reference of BACT Determination Project application on file at North Coast Unified AQMD office

SECTION D: Cost Data

Project Equipment Cost $_____ Control Equipment Cost $_____ Cost Effectiveness of Controls _____ $/lb

Remarks: _____

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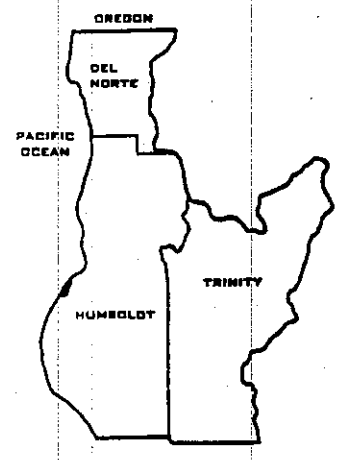


NOTICE OF PROPOSED PERMIT ISSUANCE
by the
NORTH COAST UNIFIED AIR QUALITY MANAGEMENT DISTRICT

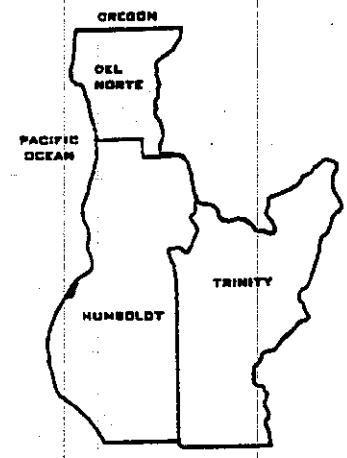
Notice is hereby given that the North Coast Unified Air Quality Management District is considering the issuance of a permit to Ultrapower Incorporated for an Authority to Construct a new wood fueled 105,000 pound per hour steam boiler and a 11,000 kilowatt electric generating unit at its Blue Lake, California plant site. Information received to date in the project application indicates that the proposed plant will not have a significant impact on air quality in the Blue Lake area and it will operate within all applicable federal, state and local regulations pertaining to control of air contaminant emissions. Persons desiring additional information or wishing to comment on the air quality aspects of the proposed project should contact the North Coast Unified AQMD, 5630 S. Broadway, Eureka, CA. 95501, telephone (707) 443-3093 prior to January 10,1983.

Charles Sassenrath
Air Pollution Control Officer

December 1,1983

NORTH COAST UNIFIED AIR QUALITY MANAGEMENT DISTRICT

5630 SOUTH BROADWAY EUREKA, CALIFORNIA 95501
PHONE (707) 443-3093



December 1,1983

Mr. Cecil D. Sterling
Director, Environmental Systems
Ultrasystems Inc.
16845 Von Karman Avenue
Irvine, CA. 92714

Dear Mr. Sterling:

We have reviewed your application for an Authority to Construct a steam/electric generation facility at your Blue Lake, California plant site. Based upon this review we have determined that the project:

1. is subject to the requirements of Regulation 1 of the California North Coast Air Basin.
2. is subject to an environmental evaluation in accordance with the California Environmental Quality Act of 1970 and the City of Blue Lake has prepared and filed a negative declaration for the project.
3. is subject to the new source review procedures specified in Rule 220(b) of the California North Coast Air Basin.
4. is not subject to the new power plant review procedures of Rule 220(c) of the California North Coast Air Basin.
5. is not subject to the requirements of federal new source performance standards or national emission standards for hazardous air pollutants.
6. is not subject to federal prevention of significant deterioration review and is not classified as a major source under the provisions of the Code of Federal Regulations 52.21.

In conducting our new source review in accordance with Rule 220(b) we have determined that project emissions of particulate matter, carbon monoxide, nitrogen oxides, and hydrocarbons will exceed the significance levels for which best available control technology (BACT) must be applied. As stated in your application BACT for nitrogen oxides, carbon monoxide and hydrocarbons must be achieved by design and operational features incorporated into the boiler. BACT for particulate emissions from the unique boiler and fuel drying system that you have proposed to construct are a bit more difficult to evaluate. We have stated on past similar boiler projects of this type, without the fuel dryer system, that BACT for control of particulate emissions was to be either a fabric collector or electrostatic precipitator capable of reducing particulate emissions to less than 0.04 pounds per million

BTU heat input to the boiler. Your proposed particulate collection device, an electro-scrubber,combines the features of a single stage electrostatic precipitator with the filtration features of a recirculating rock bed filtration system. Selection of this type control system for your boiler removes much of the reheat requirement that would be required to install a fabric collector; it avoids the questionable resistivity that may be encountered by fine sawdust emissions in an electrostatic precipitator; it avoids the slurry disposal problems encountered by use of a wet scrubber. Our economic calculations indicate that installation of an electro-scrubber may be a more costly particulate collection system than some of the alternatives, however when combined with the new technology feature of a fuel dryer it very likely represents the most appropriate BACT selection for this system. After consideration is given for the reduced fuel usage and subsequent reduced heat input for an equivalent power generation rate the resultant comparable particulate emission limitation should be restated to be 0.045 pounds per million BTU heat input.

Our analysis of project emissions on air quality in the Blue Lake area indicate only minor increases above the present background levels and in no case are any exceedences of air quality standards predicted.

Based upon your application and supporting data we propose to issue an Authority to Construct a new wood fueled steam/electric generating plant at Blue Lake, California subject to the following conditions:

a. The plant operating capacity shall not exceed 105,000 pounds per hour of steam unless prior approval is obtained from the District.
b. Air contaminant emissions from the proposed project shall not exceed:
   1. Particulate Matter: 40 percent opacity or 0.045 pounds per million BTU heat input, whichever is the more restrictive condition.
   2. Sulfur Dioxide: 0.03 pounds per million BTU heat input.
   3. Nitrogen Oxides: 0.20 pounds per million BTU heat input.
   4. Carbon Monoxide: 0.35 pounds per million BTU heat input

c. Ultrasystems shall provide stack test ports, platforms and platform access as specified by the District.

d. Ultrasystems shall install, maintain and continuously operate a recording smoke opacity meter in the stack from the electro scrubber at a location specified by the District.

e. The Ultrasystems plant shall be fueled exclusively with wood and bark, unless prior approval is obtained from the District for use of an alternate type of fuel.

f. Within 120 days after plant start-up Ultrasystems shall test the boiler and dryer for emissions of particulate matter, sulfur dioxide, nitrogen oxides and carbon monoxide and report the results to the District. Said tests shall be conducted at maximum design operating capacity.

All procedures for testing and monitoring at the Ultrasystems plant shall be in accordance with NSPS Sub Part D, Sections 60.46 and 40 CFR Part 60, Appendix B.

Please submit additional plans and specifications of boiler, dryer and air emission control equipment details to our office for approval as they become available during later design phases of the project.

Sincerely,

Charles Sassenrath
Air Pollution Control Director

Dave Allen

cc. EPA
ARB
City of Blue Lake
Mendocino Co. APCD
No. Sonoma Co. APCD
Siskiyou Co. APCD

EMISSION SUMMARY
(based on 162 million BTU/hr.heat input)

POLLUTANT	lb/mmBTU	lb/hr	tons/yr*	tons/yr**
Particulate	0.045	7.3	29.4	32
Carbon Monoxide	0.33	53	215	234
Nitrogen Oxides	0.15	24	98	106
Sulfur Dioxide	0.02	3.3	13	14
Hydrocarbons	0.07	11	46	50

* based on 92% service factor
** based on 100% service factor

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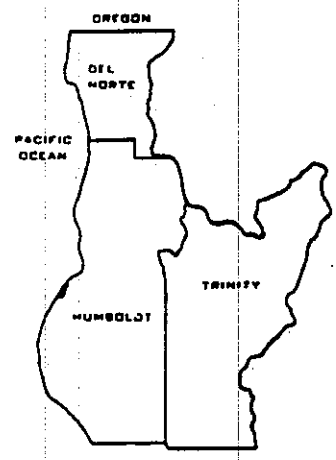

December 13, 1985

Mr. Cecil Sterling
Ultrapower Inc.
16845 Von Karman Ave.
Irvine, CA 92714

Dear Mr. Sterling:

In accordance with the provisions of Regulation 1 of the California North Coast Air Basin and EPA regulations 40CFR 52.21, the North Coast Unified Air Quality Management District has reviewed the revised application submitted by Ultrapower Inc. for revision of the carbon monoxide emission standard for your 105,000 pound per hour steam boiler and 11,000 kilowatt electric generating plant at Blue Lake, Humboldt County, California.

On November 7, 1985 the North Coast Unified AQMD solicited comments from the public regarding its proposal to grant a revised Authority to Construct to Ultrapower Inc. No comments were received on the project; thereby the North Coast Unified AQMD issues the attached Authority to Construct, HAC-129a, for the above described facility subject to the specified terms and conditions. The project as finally approved does not contain any changes from the initially proposed action as set forth for public comment.

This Authority to Construct shall take effect immediately.

Sincerely,

Charles Sassenrath
Air Pollution Control Officer

cc EPA
ARB
Blue Lake Planning

TABLE 2
ULTRAPOWER, BLUE LAKE
MODELING RESULTS (ug/m^3)

POLLUTANT/ AVERAGING TIME	EMISSION RATES (lb/hr)	MODELED RESULTS	MONITORING LEVEL EXEMPTION	ASSUMED BACKGROUND	PROJECT IMPACT	CALIF. STANDARDS	NATIONAL STANDARDS	PSD CLASS II INCREMENTS
TSP	7.3							
24-hr		7.3	10	134	141.0	100	150/260	37
Annual		0.7	--	49	49.7	60	75	19
CO	180							
1-hr		450	--	17,100	17,550	23,000	40,000	--
8-hr		315	575	3,762	4,077	10,000	10,000	--
NO_2	24.0							
1-hr		60.0	--	207	267	470	--	--
Annual		2.4	14	32	35	--	100	--
SO_2	3.3							
1-hr		3.4	--	52	56	655	--	--
3-hr		3.1	--	52	55	--	1300	512
24-hr		1.4	13	8	10	131	365	91
Annual		0.1	--	8	9	--	80	20

Concentrations for periods of less than 24 hours are estimated from EPA factors of 2.5 for 1 hour, 2.25 for 3 hours and 1.75 for 8 hours applied to the Valley 24-hr concentrations. Annual concentrations are estimated by applying an EPA recommended factor of 0.1 to the Valley 24-hr concentrations.